Applicants reply that Bolick has a filing date of Sep. 30, 1997 and the present application claims priority from provisional Appl.No. 60/060,414, filed 09/30/97. Consequently, Bolick is not prior art.

Respectfully submitted,

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Histogram compression can be used to preprocess simple images to help the ~~performnace~~ performance of the preferred embodiment method. If the number of used ~~intersity~~ intensity levels is small, then allow the side information to specify what intensity levels are in use and represent each pixel intensity with a reduced number of ~~ibts~~ bits.

For example, if only 29 ~~levls~~ levels are used in a given image, represent the image using only 5 ~~ibts~~ bits per pixel after specifying those 29 levels explicitly. This makes the preferred ~~embdoiment~~ embodiment method avoid compressing 3 bitplanes so as to increase compression efficiency. However, when to use histogram compaction must be decided carefully, taking into ~~accont~~ account the tradeoff between bits added by overhead and saved by removal of redundant bitplanes.

Experiments indicate that histogram compaction can help compression of some simple images. First, preprocess us.raw (512x448 pixels) with a threshold of 24 to obtain us.idp (this contains only the simple regions in the original image). When compressing this image without preceding histogram ~~empaction~~ compaction, yielded a file of 9161 bytes. When combined with ~~hitogram~~ histogram compaction, only 6 bitplanes are necessary (or 42 ~~intesnity~~ intensity levels are used for the whole image) and ~~tahe~~ the compressed ~~ile~~ file size is as small as 8373 bytes.

It has to be noted that the preferred ~~embdoiment~~ embodiment provides much ~~e fhte~~ of the gain achievable from histogram ~~emparction~~ compaction without some of its drawbacks. Specifically, there is no need to send overhead bits and the ~~mehtod~~ method adapts automatically to the occurrence of different histograms in different regions of the image.

While better ~~resuls~~ results can be expected by using JPEG LS or CALIC for the same images, the preferred embodiment is very simple and offers embedded bitstream and bit ~~ecalablilty~~ scalability. Thus provided there is a reasonable way to segment a ~~compund~~ compound image (e.g., cmpnd1.raw), this lossless compression method can be incorporated with an embedded wavelet coder for compound images, i.e., apply this method to the simpler area (e.g., text regions of cmpnd1.raw) and ~~wavelt~~ wavelet coder to the natural image area (e.g., photo region of cmpnd1.raw).

The remaining issue is to determine effective ways of separating simple and natural image regions. This task is left to the encoder and appropriate overhead is

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